

## MINUTES OF DOT-AGC BRIDGE DESIGN SUBCOMMITTEE MEETING

The DOT-AGC Joint Bridge Design Subcommittee met on April 14, 2004. Those in attendance were:

Berry Jenkins	Manager of Highway Heavy Division, Carolinas Branch AGC (Co-Chairman)
Greg Perfetti	State Bridge Design Engineer (Co-Chairman)
Paul Lambert	Structure Design Project Engineer
Tom Koch	Structure Design Project Engineer
Ron Hancock	State Bridge Construction Engineer
Chris Britton	Taylor and Murphy Construction Co.
Richard Holshouser	Sanford Contractors, Inc.
Mark Lively	Crowder Construction
Richard Kirkman	Dane Construction, Inc.
Chris Kreider	Operations Engineer - Geotechnical Engineer Unit
Cameron Cochran	Bridge Construction Engineer
Gichuru Muchane	Structure Design Engineer

During the review of the minutes of the February 11<sup>th</sup>, 2004 meeting, the following items were discussed:

1. *Changes to Metallization Project Special Provisions*

Mr. Hancock and Mr. Koch reviewed the highlights of the most recent changes to the Special Provision on Metallization.

2. *Electronic Submittals*

Mr. Perfetti and Mr. Lambert discussed unresolved issues relating to electronic submittals. These issues include IT's limit on the size of email attachments, email box size limits, and securing privileged or proprietary information submitted by contractors. Mr. Jenkins suggested assigning a unique access code that enables each contractor to view submittals pertaining to their contracts only.

3. *12" Tape over Cored Slab Joints - Minutes Item 5(iv)*

Mr. Perfetti and Mr. Hancock sought clarification on Mr. Holshouser's suggestion to revert back to the detail where fiber material was placed in the joint opening and then filled with hot poured rubber. Mr. Holshouser confirmed that the old joint detail had superior performance.

4. *Payment for Stored Materials - Minutes Item 5(i)*

Mr. Hancock stated that the issue of delayed payments for stored materials had now been resolved by improved communication between the Construction Unit and the Materials and Tests Unit. Mr. Britton inquired if the contractors could be copied on all estimates.

5. *Reinforced Approach Fill for Phased Construction*

Mr. Hancock provided feedback to Mr. Britton's request for guidance on constructing reinforced approach fills for phased construction projects. Mr. Hancock stated that the approach fill fabric should be placed parallel to the centerline of the roadway. He added that the Geotechnical Engineering Unit was revising their details to reflect this configuration and to allow for installation of more soil fabric walls.

The minutes of the February 11<sup>th</sup>, 2004 meeting were approved.

The following items of new business were discussed:

*1. Introduction of New Committee Member*

Mr. Perfetti introduced Mr. Chris Kreider who will be representing the Geotechnical Engineering Unit (GEU) on the AGC-DOT committee. Mr. Perfetti had suggested a GEU committee representative to address and follow-up on the geotechnical issues that often arise during meetings.

Mr. Kreider is the GEU Operations Engineer for Divisions 1-7 (Eastern Region), and he handles all Geotechnical Engineering issues after letting. Mr. Kreider announced that Mr. John Pilipchuk has recently filled the Western Regional Geotechnical Manager's position.

*2. Concrete Box Girders*

Mr. Koch stated that Structure Design has rapidly increased the number of concrete box girders projects. He explained that the rapid implementation was a result of steel cost and delivery issues, and opportunities for longer span top-down and/or rapid construction.

Mr. Jenkins inquired about sources for the box girders. Mr. Koch and Mr. Hancock stated that Bayshore Concrete Products, Prestress Carolinas, and Standard Concrete all have the capability to construct box girders.

Mr. Britton inquired if it is cheaper to use concrete girders in lieu of box girders. Mr. Perfetti stated that our experience with box girders is limited, but Structure Design expects that the cost will be competitive once their use increases.

Mr. Jenkins inquired if NCDOT was considering a position on the steel cost and delivery issues. Mr. Hancock stated that at this time NCDOT is providing no adjustments on let contracts, and we are watching how the FHWA responds to the construction industry. He added that he is aware some states have employed adjustment clauses for future contracts. NCDOT continues to look for alternate ways of providing relief that do not involve price adjustments. Mr. Jenkins inquired about the expectations on contractors if they experience delays related to steel delivery. Mr. Hancock stated that at this time there has not been a situation where delivery times have been an issue, but in such cases the Construction Unit will try to work it out with the contractor.

*3. Lump Sum Projects*

Mr. Koch informed the committee that Structure Design has developed a policy for Lump Sum Projects. The policy shall apply to all cored slab projects with an off-site detour, and shall be effective with the September 2004 letting. Mr. Koch stated that generally, all items except for the foundation shall be paid for on a lump sum basis.

Mr. Jenkins inquired if the lump sum shall be limited by the size of the project. After some discussion it was agreed that including roadway items can complicate the process and that it is better to initially keep the projects relatively small, but periodically review the criteria to possibly include other types of projects.

4. *Horizontally Split Precast Box Culverts*

Mr. Koch stated that NCDOT had received a proposal to install a horizontally split precast box culvert that is being allowed as a trial installation. Mr. Hancock noted that one advantage was that a smaller crane would be required for installation. Mr. Perfetti noted that the split culverts would have longitudinal and transverse joints, which would need to be wrapped and sealed.

5. *Metal SIP Forms with Prestressed Concrete Girders*

Mr. Koch stated that some concrete producers have requested that NCDOT standardize the spacing of the embedded clips to which SIP forms are welded. Mr. Hancock added that the producers need to know what type of SIP forms the contractors would be using before they could embed the appropriate clips. Mr. Lambert noted that the SIP form suppliers would not certify the SIP form load rating if a different supplier's clips are used. He added that most clip spacings that his group reviews are between 12"–15". *Structure Design will continue to pursue this effort, as some producers are experiencing delays as they wait for overhang and SIP form details from the contractors.*

6. *Other*

- i. Mr. Britton inquired if drill logs from the drillers were required for payment. Mr. Hancock stated that drill logs were not required, but classification of the material encountered during the drilling operation is needed for payment. Mr. Britton sought clarification on whether the drill quantities were shown on the drill logs or the soil classification. *Mr. Hancock stated that the Department would fill out the drill logs and ask the contractor to initial. He stated that the drill logs were only to establish the quantity of rock drilled.*
- ii. Mr. Jenkins inquired whether Bridge Maintenance would publish a letting list for the NC Moving Ahead projects. Mr. Jenkins was concerned that if too many projects were let simultaneously, the demand may exceed the industry's capacity to complete the work. Mr. Holshouser suggested allowing flexible start and finish dates for the NC Moving Ahead projects.
- iii. Mr. Holshouser stated that on bridges that are designed continuous for live load, installing and subsequently wrecking and dismantling the wood forms was very difficult due to the continuous steel reinforcement in the deck slab that must pass through the forms. He inquired if it was acceptable to use expanded (grated) metal forms below the top mat of reinforcing steel. The metal forms would be left in place but would not be a corrosion hazard because they will be below the top mat of steel. After some discussion, Mr. Hancock asked that a project specific request be made for the Department's consideration.

7. *Next Meeting*

The next meeting is scheduled for June 7<sup>th</sup>, 2004 in the Structure Design Unit conference Room C, which is a change from the previous date of June 9<sup>th</sup>, 2004